

1 a programmed microprocessor coupled to the first interface circuit that transmits the
2 keyboard and cursor control device signals to the programmable switch, the microprocessor being
3 further programmed to detect keyboard or cursor control device signals received while the on-screen
4 programming circuit is producing video signals on the video monitor and to control the
5 programmable switch in response to the keyboard or cursor control device signals detected; and

6 a second interface circuit coupled to the programmable switch for supplying the
7 keyboard and cursor control device signals routed through the programmable switch to the selected
8 computer.

9 12. The system of Claim 11, wherein the on-screen programming circuit receives
10 horizontal and vertical synchronize signals, the system further comprising a signal generator that
11 generates internal horizontal and vertical synchronized signals.

12 13. The system of Claim 12, further comprising:
13 a synchronize switch coupled to receive the internal horizontal and vertical
14 synchronize signals produced by the signal generator and external horizontal and vertical synchronize
15 signals received from the selected computer, the synchronize switch selecting either the internal or
16 external horizontal and vertical synchronize signals for supply to the on-screen programming circuit.

17 14. The system of Claim 13, further comprising:
18 a synchronize polarizer circuit disposed between the synchronize switch and the on-
19 screen programming circuit, for receiving the selected internal or external horizontal and vertical
20 synchronize signals and converting the selected horizontal and vertical synchronize signals to a
21 predefined active logic level.

22 15. The system of Claim 14, wherein the synchronize polarizer circuit comprises:
23 a first exclusive or (XOR) gate having a first input that receives a horizontal or vertical
24 synchronize signal to be polarized and a second input that receives an average value of the horizontal
25 or vertical synchronize signal to be polarized; and

1 a second exclusive or (XOR) gate having a first input that receives an output of the
2 first XOR gate and a second input tied to a predefined logic level.

3 16. The system of Claim 13, further comprising:

4 a first and second set of buffer circuits, the first set of buffer circuits having inputs
5 coupled to receive the video signals produced by the selected computer and outputs coupled to the
6 video monitor of the workstation, the second set of buffer circuits having inputs coupled to receive
7 the video signals produced by the on-screen programming circuit;

8 a control logic circuit that enables the first and second set of buffer circuits so that the
9 video signals supplied to the video monitor of the workstation are either the video signals produced
10 by the selected computer, the video signals produced by the on-screen programming circuit or both
11 the video signals produced by the selected computer and the video signals produced by the on-screen
12 programming circuit.

13 17. The system of Claim 16, wherein the video signals produced by the on-screen
14 programming circuit display a menu of commands on the video monitor of the workstation.

15 18. The system of Claim 17, wherein the programmed microprocessor causes the on-
16 screen programming circuit to produce the video signals upon detection of a first predefined keyboard
17 or cursor control device signal.

18 19. The system of Claim 18, wherein the programmed microprocessor causes the on-
19 screen programming circuit to cease producing the video signals upon the detection of a second
20 predefined keyboard or cursor control device signal.

21 20. A system for connecting a workstation of the type that includes a keyboard, a cursor
22 control device and a video monitor to a number of computers, comprising:

23 a programmable switch for routing keyboard and cursor control signals from the
24 workstation to a selected computer and for routing video signals from the selected computer to the
25 video monitor of the workstation;

C1
1 a first interface circuit for receiving keyboard and cursor control device signals from
2 the workstation;

3 an on-screen programming circuit that produces video signals for display on the video
4 monitor;

5 a programmed microprocessor coupled to the first interface circuit that transmits the
6 keyboard and cursor control device signals to the programmable switch and controls the on-screen
7 programming circuit to produce the video signals upon the detection of a predefined input from a user
8 of the workstation, the programmed microprocessor further operating to detect keyboard or cursor
9 control device signals received while the on-screen programming circuit is producing video signals on
10 the video monitor and to control the programmable switch in response to the keyboard or cursor
11 control device signals detected; and

12 a second interface circuit disposed between the programmable switch and the selected
13 computer for supplying the keyboard and cursor control device signals routed through the
14 programmable switch to the selected computer.

Pub 12
15 21. The system of Claim 20, wherein the on-screen programming circuit receives
16 horizontal and vertical synchronize signals, the system further comprising a signal generator that
17 generates internal horizontal and vertical synchronize signals.

18 22. The system of Claim 21, further comprising:

19 a synchronize switch coupled to receive the internal horizontal and vertical
20 synchronize signals produced by the signal generator and external horizontal and vertical synchronize
21 signals received from the selected computer, the synchronize switch selecting either the internal or
22 external horizontal and vertical synchronize signals for supply to the on-screen programming circuit.

23 23. The system of Claim 22, further comprising:

24 a synchronize polarizer circuit disposed between the synchronize switch and the on-
25 screen programming circuit, for receiving the selected internal or external horizontal and vertical

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synchronize signals and converting the selected horizontal and vertical synchronize signals to a predefined active logic level.

24. The system of Claim 23, wherein the synchronize polarizer circuit comprises:

a first exclusive or (XOR) gate having a first input that receives a horizontal or vertical synchronize signal to be polarized and a second input that receives an average value of the horizontal or vertical synchronize signal to be polarized; and

a second exclusive or (XOR) gate having a first input that receives an output of the first XOR gate and a second input tied to a predefined logic level.

25. The system of Claim 24, further comprising:

a first and second set of buffer circuits, the first set of buffer circuits having inputs coupled to receive the video signals produced by the selected computer and outputs coupled to the video monitor of the workstation, the second set of buffer circuits having inputs coupled to receive the video signals produced by the on-screen programming circuit;

a control logic circuit that enables the first and second set of buffer circuits so that the video signals supplied to the video monitor of the workstation are either the video signals produced by the selected computer, the video signals produced by the on-screen programming circuit or both the video signals produced by the selected computer and video signals produced by the on-screen programming circuit.

26. A system for connecting a workstation of the type that includes a keyboard, a cursor control device and a video monitor to a number of computers, comprising:

a programmable switch for routing keyboard and cursor control signals from the workstation to a selected computer and for routing video signals from the selected computer to the video monitor of the workstation;

a first interface circuit for receiving keyboard and cursor control device signals from the workstation;

an on-screen programming circuit that produces video signals for display on the video monitor;

a processor coupled to the first interface circuit that transmits the keyboard and cursor control device signals to the programmable switch and controls the on-screen programming circuit to produce the video signals upon the detection of a predefined input from a user of the workstation, the processor further operating to detect keyboard or cursor control device signals received while the on-screen programming circuit is producing video signals on the video monitor and to control the programmable switch in response to the keyboard or cursor control device signals detected; and

a second interface circuit disposed between the programmable switch and the selected computer for supplying the keyboard and cursor control device signals routed through the programmable switch to the selected computer.

27. The system of Claim 26, wherein the on-screen programming circuit receives horizontal and vertical synchronize signals, the system further comprising a signal generator that generates internal horizontal and vertical synchronize signals.

28. The system of Claim 27, further comprising:

a synchronize switch coupled to receive the internal horizontal and vertical synchronize signals produced by the signal generator and external horizontal and vertical synchronize signals received from the selected computer, the synchronize switch selecting either the internal or external horizontal and vertical synchronize signals for supply to the on-screen programming circuit.

29. The system of Claim 28, further comprising:

a synchronize polarizer circuit disposed between the synchronize switch and the on-screen programming circuit, for receiving the selected internal or external horizontal and vertical synchronize signals and converting the selected horizontal and vertical synchronize signals to a predefined active logic level.

30. The system of Claim 29, wherein the synchronize polarizer circuit comprises:

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1 a first exclusive or (XOR) gate having a first input that receives a horizontal or vertical
2 synchronize signal to be polarized and a second input that receives an average value of the horizontal
3 or vertical synchronize signal to be polarized; and

4 a second exclusive or (XOR) gate having a first input that receives an output of the
5 first XOR gate and a second input tied to a predefined logic level.

6 31. The system of Claim 30, further comprising:

7 a first and second set of buffer circuits, the first set of buffer circuits having inputs
8 coupled to receive the video signals produced by the selected computer and outputs coupled to the
9 video monitor of the workstation, the second set of buffer circuits having inputs coupled to receive
10 the video signals produced by the on-screen programming circuit;

11 a control logic circuit that enables the first and second set of buffer circuits so that the
12 video signals supplied to the video monitor of the workstation are either the video signals produced
13 by the selected computer, the video signals produced by the on-screen programming circuit or both
14 the video signals produced by the selected computer and video signals produced by the on-screen
15 programming circuit.

16 32. A system for connecting a workstation of the type that includes a keyboard, a cursor
17 control device and a video monitor to a number of computers, comprising:

18 a programmable switch for routing keyboard and cursor control signals from the
19 workstation to a selected computer and for routing video signals from the selected computer to the
20 video monitor of the workstation;

21 a first interface circuit for receiving keyboard and cursor control device signals from
22 the workstation;

23 an on-screen programming circuit that produces video signals for display on the video
24 monitor;
25

1 a programmed logic circuit coupled to the first interface that transmits the keyboard
2 and cursor control device signals to the programmable switch and controls the on-screen
3 programming circuit to produce the video signals upon the detection of a predefined input from a user
4 of the workstation, the programmed logic circuit further operating to detect keyboard or cursor
5 control device signals received while the on-screen programming circuit is producing video signals on
6 the video monitor and to control the programmable switch in response to the keyboard or cursor
7 control device signals detected; and

8 a second interface circuit disposed between the programmable switch and the selected
9 computer for supplying the keyboard and cursor control device signals routed through the
10 programmable switch to the selected computer.

11 33. The system of Claim 32, wherein the on-screen programming circuit receives
12 horizontal and vertical synchronize signals, the system further comprising a signal generator that
13 generates internal horizontal and vertical synchronize signals.

14 34. The system of Claim 33, further comprising:

15 a synchronize switch coupled to receive the internal horizontal and vertical
16 synchronize signals produced by the signal generator and external horizontal and vertical synchronize
17 signals received from the selected computer, the synchronize switch selecting either the internal or
18 external horizontal and vertical synchronize signals for supply to the on-screen programming circuit.

19 35. The system of Claim 34, further comprising:

20 a synchronize polarizer circuit disposed between the synchronize switch and the on-
21 screen programming circuit, for receiving the selected internal or external horizontal and vertical
22 synchronize signals and converting the selected horizontal and vertical synchronize signals to a
23 predefined active logic level.

24 36. The system of Claim 35, further comprising:

25 a synchronize polarizer circuit disposed between the synchronize switch and the on-

1 screen programming circuit, for receiving the selected internal or external horizontal and vertical
2 synchronize signals and converting the selected horizontal and vertical synchronize signals to a
3 predefined active logic level.

4 531. The system of Claim 36, further comprising:

5 a first and second set of buffer circuits, the first set of buffer circuits having inputs
6 coupled to receive the video signals produced by the selected computer and outputs coupled to the
7 video monitor of the workstation, the second set of buffer circuits having inputs coupled to receive
8 the video signals produced by the on-screen programming circuit;

9 a control logic circuit that enables the first and second set of buffer circuits so that the
10 video signals supplied to the video monitor of the workstation are either the video signals produced
11 by the selected computer, the video signals produced by the on-screen programming circuit or both
12 the video signals produced by the selected computer and video signals produced by the on-screen
13 programming circuit--.

14 Respectfully submitted,

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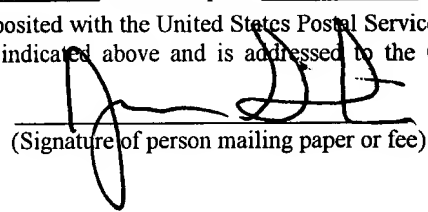
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